



SM – 729

**Fourth Semester B.Voc. Degree Examination, May/June 2018
(CBCS) (Fresh) (2017-18 and Onwards)
INFORMATION TECHNOLOGY
405 : Data Communication Networks**

Time : 3 Hours

Max. Marks : 70

Instruction : Answer all Sections.

SECTION – A

Answer **any ten** of the following :

(10×2=20)

1. Expand NIC and TCP.
2. What is a protocol ?
3. What are the responsibilities of the data link layer ?
4. Define Bit Rate.
5. What is multiplexing ?
6. What is gateway ?
7. What is the throughput of pure aloha ?
8. What is ethernet ?
9. What is polling ?
10. What are transparent bridges ?
11. What is a datagram ?
12. What is meant by choke packet ?

P.T.O.

Answer any five of the following :

13. a) List two ways in which the OSI reference model and TCP/IP reference model are same. Then list two ways in which they differ. 5
b) Compare mesh topology with star topology. 5
14. a) Explain Shannon capacity of a Noisy channel. 5
b) Explain Manchester encoding scheme. 5
15. a) Explain the internal structure of optical fibre cable. List the advantages of optical fibres over copper cables. 5
b) Explain CRC method of error detection. Give an example. 5
16. What is the disadvantages of GO-Back-N protocol ? Explain how it is overcome in selective repeat protocol. 10
17. What is channelization ? List 3 types of channelization schemes. Explain any one. 10
18. Compare link state routing and distance vector routing. 10
19. Explain the following :
a) Flooding. 5
b) Counting to infinity problem. 5
20. Explain the following :
a) Leaky bucket algorithm. 5
b) Token bucket algorithm. 5
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